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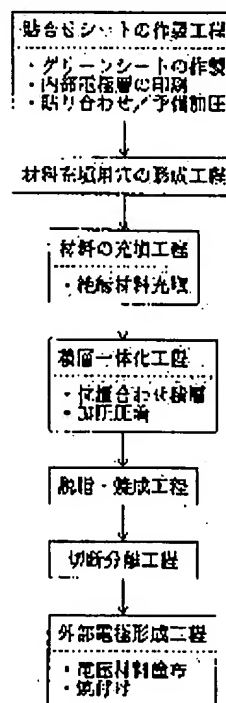
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(54) MANUFACTURE OF LAMINATED PIEZOELECTRIC/ELECTROSTRICTIVE ACTUATOR ELEMENT

(57)Abstract:

PURPOSE: To provide the mechod, which can be limitlessly brought close to an internal all-surface-electrode method, and wherein the internal electrode layers can be readily connected to external electrodes by every one layer after another even if a green sheet layer is made thin.

CONSTITUTION: The following steps are provided. (a) A manufacturing step for a stuck sheet having the internal electrode layer between green sheets of piezoelectric/ electrostrictive material. (b) A step for regularly forming many filling holes. (c) A step for filling insulating material into each hole so as to form a unit sheet. (d) A step for forming a laminated layers as a unitry body by deviating many unit sheets by a half pitch. (e) A degreasing and firing step for a unitary block. (f) A cutting and separating step for firing block so that the insulating-material filled part is exposed for each unit sheet. (g) A step for forming a pair of external electrodes for connecting the internal electrode layers one by one after another on the cut surface of the main body of an element. The order of the firing and the cutting can be reversed. Resin material, which is removed in degreasing, can be used in place of the insulating material. There is also the constitution, wherein the electrode material, the insulating material and the like are alternately filled in the holes.



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